

REMARKS

Claims 1 – 12, 15 and 16 were previously pending in the present application. Claims 8 and 10 have been cancelled in this paper, leaving Claims 1 – 7, 9, 11, 12, 15 and 16 pending and at issue. Of the remaining claims, all stand rejected by the cited art. Applicant requests reconsideration in view of the amended claims and the remarks below.

Additionally, Replacement Sheets for drawing FIGS. 1 – 4 are appended hereto for approval. These drawings were inadvertently omitted from the Response filed on June 30, 2008.

The Examiner's position regarding the teaching of Stevenson is correct, namely that Stevenson teaches a power storage system for a hybrid drive vehicle having a driving system with at least one electric apparatus and a power storage having a stator provided winding and at least one rotor with a magnetic-flux generating permanent magnets where the rotor is connected to a flywheel for storage of energy in the form of kinetic energy in at least one rotary mass. The power storage is arranged to transmit power to and from the electric apparatus by the controller.

This teaching corresponds to the stand of the technique representing the starting point of the present invention and which the present invention has the aim to improve.

The invention thus addresses the problem of transmitting power between the electric apparatus and the storage at optimized efficiency at very different conditions.

These conditions include on one hand transmitting energy from the kinetic storage at a low voltage level, e.g. for charging a battery and for other kinds of devices where a low voltage level is appropriate. The voltage level is lower than 380 V, typically much lower.

On the other hand, the system should be optimized under conditions represented by a strong retardation or acceleration of the vehicle representing a very high power to be transmitted to and from the kinetic storage, respectively. To operate efficiently, a high voltage is advantageous under such conditions, typically above 380 V. This is according to the invention solved by providing two independent windings adapted to these two conditions.

Claim 1 has now been amended to reflect the operation of the two separate windings at a low and a high voltage.

Applicant contends here that (1) one of skill in the art would not consider it obvious to combine the teachings of Kawamura to Stevenson, and (2) even if it were obvious, *arguendo*, one of skill in the art would not arrive at the present invention with such a combination.

In the first place, Kawamura does not disclose a device that alternatively operates as a motor or a generator. The device of Kawamura is solely a generator and thus power transmission is performed only in one direction.

It would therefore not be obvious for the skilled person to try to apply the teaching of Kawamura to Stevenson, and if so, the question arises how to make use of that teaching when the power is to be transmitted in either direction.

Secondly, the device of Kawamura is intended for power supply only at low voltages of different levels. The lowest level is in the range of 12 – 28 V and the higher level is in the range of 100 – 200 V. The two levels represent two kinds of equipment in the vehicle. Kawamura does not mention anything about providing power for driving the vehicle.

The two voltage levels of Kawamura thus are moderate and both are within what is now explicitly claimed as the low voltage level in the present application. Both the levels are far below what is explicitly claimed as the high voltage level. Therefore, Kawamura does not provide any basis for a teaching where the high voltage level is at a level suitable for accelerating the vehicle.

The applicant understands the position that the test for obviousness is not whether the secondary reference can be bodily incorporated into the structure of the primary reference or not. However, in the present case a change of principle nature is required to combine the references. Of course, any skilled person is aware of the fact that an electrical machine can be operated either as a motor or as a generator and any skilled person understands that a flywheel cooperating with an electric machine implies that the machine is a generator and a motor. However, that does not mean that it would be obvious to the skilled person to apply a feature that is specifically related to a generator in a context with an electric machine being alternately a generator and a motor.

The two voltage levels as now defined represents not only a quantitative difference in relation to Kawamura, but rather a qualitative difference, since the high voltage level is at a level making it suitable for accelerating the vehicle and to make use of its retardation energy.

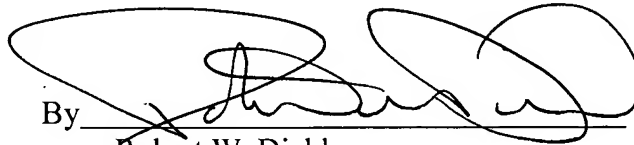
Accordingly, the present claims, as amended, distinguish over the cited art and should be considered to be in condition for allowance. Reconsideration of all claims is respectfully requested.

CONCLUSION

Claims 1 – 7, 9, 11, 12, 15 and 16 are pending and at issue. Claim 1 has been amended to place the application in better condition for allowance. Replacement sheets for FIGS. 1 – 4 are also attached.

Should any formalities remain which may be addressed by Examiner amendments, the examiner is requested to contact by phone the undersigned attorney to expedite the prosecution of the present application.

Respectfully submitted,

By 

Robert W. Diehl
PTO Reg. No. 35,118
Seyfarth Shaw LLP
Attorneys for Assignee
131 S. Dearborn Street
Suite 2400
Chicago, Illinois 60603
312-460-5000
312-460-7557 (fax)